

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A scanning optical system comprising:

a deflector having a reflection surface pivoting about a rotation axis, said reflection surface deflecting a light beam toward an object surface such that said light beam is scanned over the object surface in a main scanning direction;

a mirror system arranged to reflect back said light beam deflected by said reflection surface so that said light beam travels toward the object surface after being deflected twice by said deflector, the mirror system reflecting back said light beam such that a projection of said light beam on an auxiliary scanning section is incident on said reflection surface for a first time at a first incident angle different from a second incident angle at which said projection of said light beam is incident on said reflection surface for a second time, said auxiliary scanning section being perpendicular to said main scanning direction; and

a blocking member disposed between said deflector and the object surface, said blocking member preventing an unwanted light flux from striking the object surface, the unwanted light flux traveling from said deflector toward the object surface after being deflected by said deflector only once, wherein the difference between the first incident angle and the second incident angle provides separation between a path of the twice deflected light beam and a path of the once deflected unwanted light flux.

2. (Original) The scanning optical system according to claim 1,

wherein said deflector includes a plurality of reflection surfaces, and

wherein said mirror system reflects back said light beam such that said light beam is deflected twice by the same one of said plurality of reflecting surfaces.

3. (Original) The scanning optical system according to claim 1, wherein said blocking member is disposed so as to prevent the unwanted light flux from striking the object surface shortly before the light beam enters a scanning area defined on the object surface.

4. (Original) The scanning optical system according to claim 1, further comprising an optical sensor that detects the position of the light beam deflected by said deflector to determine the timing of initiating modulation of the light beam,

wherein said blocking member is disposed so as to block the unwanted light flux when the light beam is striking said optical sensor.

5. (Original) The scanning optical system according to claim 1, wherein said blocking member is an elongated member extending in parallel to said main scanning direction.

6. (Original) The scanning optical system according to claim 1, wherein said blocking member is an opaque member.

7. (Original) The scanning optical system according to claim 1, wherein said blocking member is a mirror reflecting the unwanted light flux in a direction other than toward the object surface.

8. (New) A scanning optical system comprising:
a deflector having a reflection surface pivoting about a rotation axis, said reflection surface deflecting a light beam toward an object surface such that said light beam is scanned over the object surface in a main scanning direction;
a mirror system arranged to reflect back said light beam deflected by said reflection surface so that said light beam travels toward the object surface after being deflected twice by said deflector, the mirror system reflecting back said light beam such that a projection of said light beam on an auxiliary scanning section is incident on said reflection surface for a first time at a first incident angle different from a second incident angle at which said projection of said light beam is incident on said reflection surface for a second time, said auxiliary scanning section being perpendicular to said main scanning direction; and

a blocking member disposed between said deflector and the object surface, said blocking member preventing a light beam deflected by said deflector only once at the first incident angle from striking the object surface, while permitting a light beam deflected by said deflector a second time at the second incident angle to reach the object surface.

9. (New) The scanning optical system according to claim 8, wherein the difference between the first incident angle and the second incident angle provides separation between a path of the twice deflected light beam and a path of the once deflected light beam.

10. (New) The scanning optical system according to claim 8,
wherein said deflector includes a plurality of reflection surfaces, and
wherein said mirror system reflects back said light beam such that said light beam is deflected twice by the same one of said plurality of reflecting surfaces.

11. (New) The scanning optical system according to claim 8, wherein said blocking member is disposed so as to prevent the once deflected light beam from striking the object surface shortly before the twice deflected light beam enters a scanning area defined on the object surface.

12. (New) The scanning optical system according to claim 8, further comprising an optical sensor that detects the position of the twice deflected light beam to determine the timing of initiating modulation of the light beam,

wherein said blocking member is disposed so as to block the once deflected light beam when the twice deflected light beam is striking said optical sensor.

13. (New) The scanning optical system according to claim 8, wherein said blocking member is an elongated member extending in parallel to said main scanning direction.

14. (New) The scanning optical system according to claim 8, wherein said blocking member is an opaque member.

15. (New) The scanning optical system according to claim 8, wherein said blocking member is a mirror reflecting the once deflected light beam in a direction other than toward the object surface.